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FRACTURE OF THE NECK OF THE OS FEMORIS.

[Communicated for the Boston Medical and Surgical Journal.]

Messrs. Editors,—In the *New England Journal of Medicine and Surgery*, No. 4, Vol. I., October, 1827, I reported a case of fracture of the cervix femoris within the capsular ligament, in which there was a perfect cure; and as an opportunity has since been obtained of an examination of the fracture, I have thought it might not be uninteresting, especially to the junior members of the profession, to re-publish in part the case, with the views then taken, together with the appearances on a *post-mortem* examination.

This patient was a man of a feeble constitution, æt. 52, who on July 22d, 1824, fell in a saw mill, from a height of 16 feet, and struck on the left thigh and trochanter. When he was raised, the leg stood at an angle of about 40 degrees from the body, but it was immediately brought into place by an assistant. On examination a few hours after the accident, the foot and knee were found everted, the limb was slightly shortened, but could easily be brought to its natural length, there was a sensible alteration in the position of the trochanter major, and when the patient was directed to bear on the affected limb, it gave him great pain in the region of the trochanter minor. The nature of the accident was made known, and constant extension for at least ninety days recommended. Objections were made by the patient to any appliances, more particularly on account of a pectoral affection, which rendered a recumbent position uncomfortable for any considerable length of time, and also in the hope that the accident might not be of so serious a character as represented.

The limb was placed in the most comfortable position, and directions were given the patient to remain as quiet as possible. On the fifth day it had contracted two and a half inches, and the eversion of the foot and knee was greater than on the day of the accident. By steady extension it could be brought to its natural length, but when this was removed it would readily contract again with a slight jerk, and an increase of pain; this was greatly aggravated by rotation inward. There was but little swelling or external inflammation about the joint.

Sir Astley Cooper's views and treatment in cases of this character were examined, and made known to the patient, together with the reasons why they should not be adopted as a rule of practice. Mechanical appliances were instituted, and for seventy days constant extension was kept up, together with such lateral compression as the circumstances indicated; after which, permission was given to sit up more or less, and move the limb with the greatest care without bearing any weight on it. In about four weeks after the limb was taken out of the apparatus, he began to walk with a cane, and shortly after recovered entirely, without any shortening or apparent eversion of the foot or knee.

For a description of the apparatus and its mode of application, reference is made to the full report of the case.

This patient died of phthisis pulmonalis nine years after the accident; and upon examination, the neck of the os femoris was found to have been fractured transversely near the head, and firmly united with ossific union, somewhat shortened and enlarged. A small spiculum of bone, about half an inch long, and one fourth wide, lying near the cervix, seemed to grow out from that portion of the edge of the fracture belonging to the shaft. No considerations could induce the friends to let me have this specimen for the benefit of science.

Whether this is the first well-attested case in this country of a perfect cure of fracture of the neck of the femur within the capsular ligament, I am not able to say; but it is believed that no one questioned the soundness of Sir Astley Cooper's views upon this subject until this case was reported. This eminent surgeon objected to making mechanical appliances in fracture of the neck of the os femoris within the capsular ligament—1st, on account of the difficulty of keeping up constant extension; 2d, of making lateral compression; 3d, that bony union never took place when the fracture was within the capsular ligament. In answer to these views, it was considered that constant extension could be maintained, and had been, in the case above reported, and that lateral compression could be carried to any extent which the nature of the case required. Sir Astley's third objection, that bony union could not take place when the fracture was within the capsular ligament, because " the neck and head of the bone are supplied with blood from the periosteum of the cervix, and the reflected membrane which covers it, and that when the bone is fractured, if the periosteum be torn through, and the reflected membrane broken, to which there can be but very rare exceptions, all the means of ossific action are, in consequence of such fracture and laceration, necessarily destroyed in the head of the bone," required a more full consideration.

It was contended that the whole cavity of the joint was surrounded with the synovial membrane, which was reflected over the neck and head of the bone; that the bone is kept in place by strong ligaments; that the periosteum does not cover the head of the bone, or that portion within the capsular ligament; that the vessels which enter into the synovial membrane, and go to form the round ligament, and nourish the head of the bone, are reflected from the acetabulum over the round ligament to the head of the bone, as well as from the neck, and that they inosculate with each other. In fracture of the cervix femoris, the reflected membrane may be broken, but the means of ossific action are not destroyed, as the head of the bone is nourished from vessels that pass from the acetabulum over the ligamentum teres, which keep up its vitality. The same process which forms the bones in the fœtus, and promotes their growth and hardness, is carried on to unite them when fractured. This is retarded or facilitated according to circumstances. The situation of the fracture may render it slow, or old age and an impaired constitution may entirely suspend it, in parts endowed with a low degree of sensibility and vital action; but in a good constitution, when the broken extremities are reduced and kept in contact a sufficient length of time, ossific union will usually take place.

If parts destitute of periosteum cannot be united with bony union, as is contended, we are led to inquire by what action the extremities of several of the bones are formed, as of the femur, the olecranon process of the ulna, and the scapular extremity of the clavicle. Does not the same action produce the extremities of the bones that forms the other parts, differing only in degree, thereby requiring a longer time for the deposition of bony matter? And will it not as certainly unite them when they are fractured? If parts separated from the system, as the nose, ears and fingers, can be united, and do well; if the spur of the cock can be transplanted into the comb and thrive—can there be any inconsistency in believing that in fracture of the cervix femoris there remain sufficient vitality and natural action to repair the injury?

It was also observed that the experiments of Sir Astley Cooper were not conclusive, nor to be relied upon, because they were made upon animals, and could not be treated upon the correct principles of surgery; that it was impossible to produce a transverse fracture of the cervix femoris in an animal, and treat it so as to admit of ossific union, and therefore all such experiments were only calculated to mislead, and should not be relied upon in establishing general principles of practice. From the anatomy and physiology of the hip-joint in the human subject, we have good reason to believe that ossific union would take place in fracture of the neck of the bone, when treated according to the nature of the accident and condition of the parts affected.

Since the above case was reported, many fine specimens of union of the neck of the femur have been collected, and the principle seems to be well established that ossific union may be expected in fracture of the neck of the femur within the capsular ligament, when all the indications are met.

It might be well to inquire why so few cases of this character are cured, and so many abandoned to die, or become cripples for life. Most fractures of the neck of the femur are in old people, or those with an impaired constitution, who are considered unable to bear the long confinement necessary to insure ossific union, and who would be better treated with reference to making them as comfortable as possible; but it is believed that many are left, who by judicious treatment might receive permanent cures. With our present improved appliances, every indication can be answered, and the long confinement necessary to a cure made quite easy.

In fractures in parts with a low degree of sensibility, or where ossific action does not readily take place, the treatment should be the more carefully attended to.

The sooner after the accident the bones are placed in apposition and maintained there, the greater probability of avoiding that inflammation in the cavity of the joint which produces a superabundance of synovia, which so often prevents the deposition of ossific matter.

It is highly probable that in every case, however favorable, there is an increased secretion of synovial fluid; but if lateral compression be perfectly maintained, so as to keep the fractured extremities in contact, absorption will take place, and bony matter be deposited in due time. In treating fractures of the neck of the femur within the cavity of the joint, sufficient attention is not paid to lateral compression. The limb may be brought down to its natural length in transverse fractures, and yet the ends of the bones may not coaptate; and, furthermore, if lateral compression is not sufficient to hold the broken extremities so firmly together that the acetabulum will roll on the head of the bone when the body is raised, leaving the fractured extremities perfectly at rest, then the head of the bone will be carried forward with the acetabulum, and break up all union that may have commenced.

As the broken surfaces are rough, they may be brought into perfect apposition and maintained, so that all necessary movements of the body may be made without endangering displacement. Whenever the body is to be moved in the least, the lateral compression should be correspondingly increased. Our appliances must be so perfectly arranged that every indication in the case may be fully answered, or we shall have no hope of effecting bony union.

In addition to mechanical appliances, and attention to the comfort of the patient, the general condition of the system should be carefully attended to. Some patients will require depletion and the antiphlogistic regimen; while others must be treated with tonics, stimulants and a generous diet.

If perfect extension be kept up for a few weeks, the contraction of the muscles will be so much overcome that the patient will suffer but little from it; but lateral compression should not be omitted at any time until permanent union has taken place. The least motion in the fractured extremities may break up the provisional callus, and entirely destroy the recuperative power in the parts. Whenever lateral compression is abandoned, if union has not taken place, the inclination of the limb to rotation outward will most assuredly displace the bones, so as to prevent ossific union. We have seen cases which seemed to be of this character.

The difference between treating a case of fracture of the neck of the femur, and common fracture, is very great. While in the one case union readily takes place, and sometimes without surgical aid, in the other it is effected only by the most careful treatment.

Before undertaking to manage a case of this description, the surgeon should well consider whether he has skill, and appliances to fully meet every indication, or he should attempt nothing. It is better to "own up at once," than to fail for the want of those means without which we cannot expect success.

Haverhill, N. H., Feb. 4th, 1858. P. Spalding, M.D.

PERFORATION OF THE TYMPANUM—DEAFNESS—RECOVERY.

[Communicated for the Boston Medical and Surgical Journal.]

Messrs. Editors,—The annexed case of deafness, induced by perforation of the tympanum from acute and long-continued inflammation, is copied from my note-book. I beg leave to present it to you, hoping that the subject of treatment in such cases will be taken up and discussed with that ability and perspicuity which mark the efforts of our more distinguished physicians.

Very respectfully, James B. Hallinan.

Boston, February, 1858.

Jane W. S., æt. 9 years, having a large head, pale countenance, thick lips, and sallow complexion, with a flabby condition of the entire muscular system, had been affected for the last five years with deafness, and a copious discharge of purulent matter from the right ear, which made its appearance soon after recovery from an attack of scarlet fever. At first she complained of a sense of acute pain in the ear, which deprived her of rest during the night; and after having experienced much suffering for a fortnight, she became suddenly relieved by the appearance of a profuse discharge from the affected ear. The disease progressed, unrelieved by every variety of treatment adopted for its removal. In the course of the last two or three years, it had become very disagreeable, in consequence of the increase of the discharge, accompanied with an exceedingly fœtid smell. She was excluded from the society of visitors to the house, and became an object of much anxiety to her family and friends. The appetite was generally good, the hands and extremities were usually cold, the pulse languid, the tongue pale and flabby, and the general tone of the system depressed, with a tendency to enlargement of the cervical and parotid glands, the *tout ensemble* presenting an instance of an æsthenic disease, engrafting itself upon an originally feeble constitution. In the course of the disease, ulceration of the mucous membrane had taken place, and caries of the mastoid cells had just commenced, which induced the highly fœtid discharge spoken of. The sense of hearing was lost, except when the patient was spoken to in a loud tone. The tympanum was slightly perforated; its membrane was considerably thickened, so as to have lost the power of vibration under the ordinary degrees of sound.

The treatment had hitherto consisted in syringing with tepid water, aperient medicines, and the iodide of potassium, but had never been followed up with the intention of bringing the constitution under the influence of any particular system of medication; and the patient having passed through the ordeal of every variety of absurd treatment, was finally abandoned to the resources of nature, which in this instance were inadequate to effect a cure.

Having received the case in the condition described, I principally directed my exertions to the improvement of the constitution; and to rectify the innate debility of the system in general, she was ordered powders of bicarb. sodæ, pulv. rhei, and precipitated carb. ferri, in suitable doses, twice a day, with a tonic mixture of tinct. cinchonæ, sulph. quiniæ, and dilute sulph. acid, three times a day, with a generous regimen, consisting of animal diet, a wineglassful of London porter three times a day, flannel next the skin, tepid baths at night, and carriage exercise in the open air. To correct the fœtor of the discharge, lotions with creosote, alternated with solution of chlorinated soda in rose water, were resorted to. Mild counter-irritation over the mastoid process was occasionally employed, and the solid nitrate of silver was applied to the perforation of the tympanum. The treatment resulted, in the course of time, in the perfect closure of the aperture.

By continuing this treatment—varying, however, the formula, in giving sometimes the syrup of iodide of iron instead of the powders—and strictly attending to the state of the digestive organs, the disease, in the course of twelve months, yielded to the treatment; the hypertrophied condition of the tympanum became considerably diminished, so as to be readily influenced by the milder degrees of sound, and the sense of hearing in consequence became vastly improved. The system became much developed, and the discharge by degrees disappeared, so as to enable the patient to enjoy herself and form a pleasing member of society again. She is now entirely well, after having submitted to a course of treatment for the last thirteen months.

In our consideration of these cases, when coming under treatment, we should view them as having a constitutional rather than a local origin. We shall thus be more likely to accomplish a certain improvement, and shall be secure against the danger of suddenly arresting the discharge in young children, which may produce pressure on the brain and rapidly terminate in death—a case of which I witnessed not long since. In this instance, the patient was a boy seven years old, and of a strumous diathesis. The discharge existed for three years, and was very profuse, particularly in damp weather; and the air of his residence was very impure and confined. An astringent lotion was resorted to, as the basis of the treatment, by which the discharge was suddenly arrested. I was called to see the case at 12 o'clock the following night; the child was then laboring under the influence of pressure on the brain, and died in forty-eight hours after.

In case of deafness of one or both ears, not accompanied with any discharge, the cause will frequently be found to consist of thickening of the mucous membrane of the Eustachian tube, from its guttural orifice to the cavity of the tympanum, with closure of its canal. The discharge of the natural secretions from those parts into the fauces is thus prevented, as well as the ingress of atmospheric air into the cavity of the tympanum, by the deprivation of which its equilibrium is lost, and imperfection in hearing is the natural consequence. Associated with this pathological state of the tube, will be found catarrh of the head, extending to the mucous membrane of the floor of the palate and posterior nares, affecting the orifice of the Eustachian tubes in adults, inducing alteration of structure and interruption of function, requiring every means calculated to restore tone and action to the parts, and demonstrating the inutility of trusting to external and superficial means, since the balance or support to the tympanum is lost, in consequence of the interruption through the Eustachian tube of the necessary supply of atmospheric air.

It is to the unobstructed condition of the Eustachian tube, and to the combined influence of the tensor and stapedius muscles, in the state of repose, that sound in its ordinary character is conveyed to the brain, where, after having submitted to the test of quality in its transit through the cochlea and semicircular canals, its makes that final impression by which we judge of its cause, nature and effect. It is in proportion to the intensity of sound, that the tympanum is rendered tense by those muscles which govern its actions, and accommodate its functions to the concussions of sound, which, when coming suddenly and unexpectedly, cause, not infrequently, paralysis of the auditory branch of the seventh pair of nerves, with total loss of hearing. When reposing in its ordinary state of tranquillity, affected only by the vibrations of sound such as take place in the ordinary course of familiar conversation, a certain proportion of atmospheric pressure becomes necessary to sustain its functions, in transmitting those softer and more pleasing modifications of sound to the brain; and it is either to the absence of this support from closure of the Eustachian tube, or to chronic thickening of the external layer of the tympanum, from inflammation and continued purulent discharge, that deafness is owing, in nine cases out of ten. This will often yield to the well-directed efforts of an intelligent physician.

It is from the combined influence of the tensor and stapedius muscles, with a due support from the admission of air into the cavity of the tympanum, that the sense of hearing is balanced to the nicest possible degree in animals endowed with it most acutely. The power of the tensor muscle, in such cases, is more than ordinarily under the control of the will, by which the adjustment of the membrane is rendered so perfect, as to convey the softest and gentlest vibrations to the centre of innervation, and give the necessary signal of alarm. So in man, the action of this condition of the tensor muscle becomes, by practice, much improved, depending, in fact, upon a compromise between the antagonistic functions of the tensor and stapedius muscles, and constituting what is called an educated ear, which musicians and vocalists of celebrity enjoy to an extraordinary degree of perfection.

In the louder degrees of sound, the tympanum, under the influence of the tensor and stapedius muscles, is rendered exceedingly tense, by which the functions of the auditory nerve are protected from lesions consequent upon concussions of sound. As the iris excludes, by its contractions, the ingress of a superabundance of luminous rays to the posterior chamber of the eye, which would inconveniently affect the functions of the retina, so does the tensor muscle of the ear, under loud concussions of sound, by its action on the tympanum, protect the auditory branch of the seventh pair of nerves from injury.

CASE OF EXOSTOSIS OF THE HUMERUS.

BY HENRY M. SAVILLE, M.D., OF QUINCY.

[Communicated for the Boston Medical and Surgical Journal.]

CHARLES P., æt. 25, came under treatment December 3d, 1857. He is a small, spare-built man, of lymphatic temperament; has hereditary predisposition to consumption, several generations of his family having fallen victims to phthisis. About eight years ago, a small bony tumor appeared upon his right humerus, just above the insertion of the great pectoral muscle. The tumor rapidly increased in size—caries supervened, and spicula of bone were extruded for several months. The wound, however, at length healed, the arm regained its original strength, and nothing but an extensive cicatrix remained to indicate the severity of the disease. But last August, after an interval of seven years of perfect health, he experienced severe paroxysms of pain in his right arm, so acute as to render him incapable of motion of any kind—and at the same time another bony mass appeared just below the insertion of the deltoid. An unfavorable prognosis of the case was given by his physician, and he was led to prepare for an extensive necrosis of the tumor. About the middle of November, he determined to consult a female spirit medium, who has effected several marvellous cures in this vicinity. This medial lady, influenced by the ghost of Dr. Nathan Smith—*venerabile nomen*—promised to dislodge the peccant tumor, and restore him to vigorous health in a fortnight. But in spite of her benevolent designs and poultices—her mesmeric passes and heavenly influences—the tumor obstinately refused to be conjured out of existence, and continued to augment in bulk.

About six weeks ago, becoming dissatisfied with the treatment he was being subjected to, he came under my care. At that time the exostosis measured four inches in length, with a broad, well-defined base, resembling in appearance the contracted bellies of the anterior humeral muscles. He suffered extremely from lancinating pains in the tumor—his arm had lost its strength, and felt, as he expressed it, as if it were dropping off. My impression was, that so large a cancellous tumor, under the peculiar circumstances of the case, would be destroyed by caries; and without much hope of promoting the absorption of so large a mass of bone, I advised cold douches, the frequent application of ung. iodini, with the internal use of iodide of potassium to the extent of a drachm and a half daily in syr. sarsaparillæ comp. Under this treatment, the tumor began to diminish in size, the acute pains he had suffered so long left him, and, after the lapse of six weeks, his arm had nearly regained its natural shape and strength, so that he told me he could " lift a stove or handle a hammer as well as he could six months ago."

There seem to be two points of special interest in this case:—First, the rapid disappearance of so large an exostosis, when the peculiar history of the case seemed to warrant a less favorable prognosis; second, the large amount of iodine taken into the system (amounting to four ounces of the ointment and more than a pound of the iodide of potassium) not only with positive benefit, but without ptyalism, soreness of the fauces, or any of the unpleasant effects which usually follow the exhibition of large doses of this medicine.

February, 1858.

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY F. E. OLIVER, M.D., SECRETARY.

Dec. 28th.—*Cancerous Disease.* Dr. Jackson presented the specimens and reported the case, which occurred in the practice of Dr. M. S. Perry.

Mrs. S., 50 years of age, delicate and dyspeptic, was first seen in March, 1857, for a tumor of the forearm, midway between the elbow and wrist. It had existed for eleven years. It had grown rapidly within the previous four months, and been painful during the last two weeks of that time. It was superficial, movable, elastic, and about the size of a hen's egg. It was removed by Dr. Hodges; and, upon section, presented the gross appearances of encephaloid, and a microscopic examination by Drs. Ellis and Shaw gave unquestionable evidence of its malignant character. Two or three weeks after the operation, she began to have nausea and loss of appetite and strength, with occasional attacks of pain in the right hypochondrium, and subsequently vomiting. In August she began to raise blood, coughing just enough to bring it up. For about two months before her death, she had jaundice, and a tumor was detected in the epigastrium, at first to the right of, and afterward extending across, the median line. The smallest quantity of food, or liquid of the simplest character, taken into the stomach, caused intense suffering. In July a tumor appeared between the cicatrix of the one removed and the wrist. She kept her bed for the last three or four months of her life. The hæmoptysis, though never very great in amount, continued till her death, which occurred Dec. 24th, 1857.

Sectio Cadaveris.—There were found in the lungs three or four tumors, rounded, defined, opaque, rather soft, deeply stained with bile, and of a well-marked encephaloid appearance, but, on microscopic examination by Dr. Ellis, showing none of the appearances usually observed in cancer. A tumor, the size of a hazelnut, of apparently the same character as those found in the lungs, was also found just below the thyroid gland.

The right extremity of the pancreas formed a very soft tumor, about two inches in diameter, and on cutting it open a cavity was found, filled with something like grumous blood, but without coagula. On sponging this out, the interior of the cavity was rough, but on careful examination nothing of an encephaloid look was found about it. At the left extremity of the pancreas, however, encephaloid was commencing. The bile ducts were much distended, as far as the tumor, and in the gall-bladder were two calculi, of an ovoid form, quite compact, and about as large as the top of the fore-finger. One of the calculi was considerably worn at each extremity, and the other at one only; from which a change of position in the first, at some former time, may be inferred. The common duct was so firmly compressed, where it passed over the tumor, that on being cut into, air could not be forced through from above, though with much difficulty it could be from below; on being laid open, this duct was found healthy.

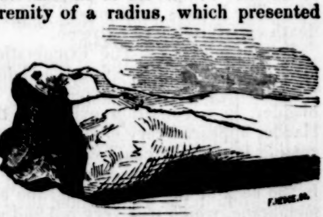
Other organs not remarkable.

The interesting points in this case are—the unusual situation of the primary disease, and its long duration for a case of encephaloid; the recurrence of the disease below its original seat, in regard to the course of the lymphatics: the effusion into the head of the pancreas when the organ seemed healthy about it, and when no tendency to hæmorrhage was shown elsewhere; lastly, and particularly, the fact that the tumors in the lungs did not show the microscopic appearances of cancer, though otherwise there was no question of the nature of the disease.

Dec. 28th.—*Knots in the Umbilical Cord.* Dr. **Coale** showed the specimen. There were two knots, about four inches apart, one being double, or what is sometimes called a figure-of-8 knot, and which is extremely rare.

Dr. **Storer** supposed these knots to be produced by the motions of the fœtus, and mentioned, in connection, a case which occurred some time since, in which the patient, seven or eight months advanced in pregnancy, being under a bed for some purpose, was suddenly surprised in that position, and hastily backing out, immediately had the usual symptoms of a dead child, of which she was delivered ten days after. A knot was found in the cord, so tightly drawn as to fully account for the death of the child by impeding the circulation. He also alluded to a case, reported by Dr. Bowditch, where there were three knots. He remarked that the cord in these cases is generally unusually long, and hence the greater liability to such an accident from the motions of the fœtus.

Jan. 11th.—*Fluid from a Hydrocele containing Spermatozoa.* Dr. **Ellis** showed the specimen, which was from a patient of Dr. Cabot. The fluid was of a milky appearance, and the quantity of spermatozoa quite large. Dr. E. supposed their presence in this fluid to be owing to dilatation and rupture of the seminiferous ducts. Dr. **Cabot** had in two other instances found spermatozoa in the fluid of a hydrocele—this having in both cases the milky appearance so noticeable in the present specimen.



Jan. 11th.—*Stellate Crack of the Radius at the Wrist.* Dr. H. J. **Bigelow** showed the carpal extremity of a radius, which presented on its articulating surface a star-shaped crack, without displacement. Slight corresponding cracks were seen in the shaft for more than an inch. The patient had entered the Hospital, under Dr. B.'s care, for other injuries, which ultimately proved fatal. At first, complaint was made only of lameness at the wrist, like that from the effect of sprain; but at the end of several days the joint exhibited swelling and tenderness, which, from its persistence, led Dr. B. to diagnosticate a stellate crack in the articulating extremity of the radius, as a probable result of the fall, he having met with a similar case two years ago—when a patient with the same symptoms had died of other injuries and exhibited a crack in the same place, but less extended than this. Dr. B. remarked that the bones of the wrist doubtless acted as a wedge to spread the corresponding hollow of the radial extremity—and that this specimen would explain the persistence of some cases of sprained wrist.

JAN. 25th.—*Vesical Calculus.* This specimen was presented some time since to the Society by Dr. J. PORTER, Jr., of North Brookfield, through Dr. GOULD, who read the accompanying history of the case.

The patient, F. C., a resident of Worcester County, was adopted by I. S. as his son when he was three weeks old. His mother says he was always troubled in passing his urine, more or less, from early infancy. The first time he passed any blood in it was at the age of 9 years. He suffered great pain for several days, had febrile symptoms, and was unable to sit up for eight or ten days. For two or three years, he had similar attacks, two or three times in each year. These attacks afterward grew more severe and more frequent, occurring as often as every month till the first week in May, 1856, when he took his bed and there remained confined almost constantly until the time of his death, which took place June 21st, 1857, he being at this time 27 years old. He never walked without assistance, even from the bed to the chair, and was not free from suffering so much as a whole day at a time during the last year of his life. There was the greatest difficulty in passing urine; sometimes he would remain on his hands and knees for two hours, before being able to void a drop. It began to pass involuntarily about the first of September, 1856, and continued to do so till he died. Before the involuntary discharge of the urine, in his agony he would frequently seize the end of the penis and grasp it so hard as to cause the blood to flow freely. For the last five years of his life, he could never sit erect, but always leaned forward and walked in a bent position—placing his feet on the ground with the greatest care. He could walk much better than he could ride.

Dr. Porter attended him after he was confined to his bed, and, though fully aware of the presence of the calculus, could never persuade himself that an operation would be justifiable, on account of the wasted strength of the sufferer. Sleep, and relief from suffering, were obtained by means of opiates during the last two months of his life. The bowels were moved daily, but he steadily lost flesh, and at death emaciation was extreme.

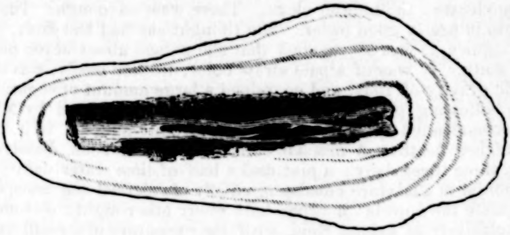
Sectio Cadaveris.—The examination was made twenty-four hours after death. Upon opening the abdomen, the mesenteric glands were found enlarged, and the omentum, intestines, &c., surrounding the bladder, in a condition evidently the result of inflammation. The bladder appeared very much contracted and diminished in size, and on cutting into it the coats were greatly thickened. Within its cavity a pear-shaped stone was found, with its smaller extremity crowded into the neck of the bladder, and the base in contact with the mucous membrane, which was very red and much of it ulcerated away. The stone measured, at the time of its removal, 3½ inches in length and 1¾ inches in width, and weighed 3½ ounces.

The left kidney was somewhat diminished in size, and contained, in its cones, small deposits, of apparently the same material that composed the stone—these being in thin layers, about half the thickness of a wafer, with a little secretion of pus underneath. The deposit seemed like a crust on the inside of the cone, but not covering the whole surface, a thin scale appearing here and there; some not a line in surface, others a quarter of an inch. Under all these deposits, pus was found.

Since the specimen was presented, it has been sawed by Dr. JACKSON, who has given the following description of its appearances:—Externally, it is generally rather rough, and upon one side of the large extremity quite so; it is brown toward the small extremity, but otherwise light colored. Although quite hard while being sawn, the cut surface presented a somewhat laminated, earthy structure, being in some parts rather compact; also being of a light color.

In the centre of the stone was found a nucleus, about 2½ inches in length and averaging not far from a quarter of an inch in diameter, which being evidently the stem of some plant, was submitted to the accomplished botanist, Mr. Charles J. Sprague, for examination.

About this foreign body exists a cavity of some size, of which the parietes are quite crumbling. There is very little crystalline appearance. The weight of the stone is at present two and a half ounces, its length and diameter falling a little short of the original measurements. The accompanying cut represents very accurately the size and appearance of the longitudinal section, with the nucleus in its cavity in the centre.



On a chemical analysis, by Dr. Bacon, the calculus proved to be "of the fusible species; the layers deposited around the foreign substance, which formed the nucleus, being composed of phosphate of lime and triple phosphate, with considerable urate of ammonia, and a little carbonate of lime and animal matter."

The nucleus, after a careful examination by Mr. Sprague, proved to be a portion of the stem of the *Archangelica atropurpurea*, as will appear from the following extract from his note to Dr. Jackson:—"At first its outward resemblance reminded me of a grape-vine twig; but I could find, on microscopical examination, no trace of the wood and medullary rays very evident in the grape. On closer examination, I noticed that the hollow portion exhibited on the walls the loose pithy appearance of herbaceous stems of annual growth, or of the larger grasses.

"Dr. Bacon, with whom I left the specimen, after a casual glance at it, suggested the resemblance between the outer striate portion, and the striate and sulcate stems of umbellifers. I then seized upon my first leisure moments, to make sections of some of the larger umbelliferous plants, and naturally chose the two principal ones which are found in our meadows and thickets. Upon comparing sections of the calculus with those of the great angelica, I found that the resemblance was very great, and, allowing for the effects of the urine upon the softer portions of the stem, I was convinced of the identity of the specimens. The plant, then, is the *Archangelica atropurpurea*, which from its even, smooth exterior, would naturally attract a boy on such an unnatural search."

FEB. 8th.—*Glucosuria.* Dr. MINOT reported the following case.

The patient was a widow, aged 55, of dark complexion, hair and eyes. In common with all her family, she was of a strongly-marked nervous temperament. She was quite stout, and had usually enjoyed good health until about two years ago, when she met with a severe bereavement, and soon after became insane. In the course of a few months she recovered her usual health. As early as May last, it was noticed that she made water very frequently, but she did not apply for medical advice until early in December, though she had lost much strength some time before that period. The symptoms of which she complained were great thirst, a dry or clammy state of the mouth, dryness of the skin, severe pain in the back, great debility, frequent palpitation, and a constant desire to pass water, which she did in large quantities. The appetite was keen. The skin was dry; the pulse very moderate: the tongue clean. There was no cough. The bowels were in pretty good order. She thought she had lost flesh.

On inquiry, it was ascertained that she passed about seven pints of urine daily. It was of a pale straw color, frothed easily, was of the specific gravity of 1034, and contained a large amount of sugar.

The following plan of treatment, being that proposed by Mialhe, was recommended to the patient, who steadily adhered to it, to the time of her death:—A drachm of bicarbonate of soda, dissolved in water, three times daily; a pint and a half of lime water daily; a tablespoonful of a mixture consisting chiefly of calcined magnesia, daily, to regulate the bowels; a vapor bath every other night; diet consisting exclusively of animal food, with the exception of a small amount of bread; port or Bordeaux wine; as little water as possible; a cold hip bath, followed by friction, daily; carriage exercise in fine weather, and occasionally a short walk.

Under this treatment an improvement in the condition of the patient was soon manifest, and continued, with few interruptions, until within a few days of her death. The most striking change was in the amount of thirst, the pain in the back and the palpitation, which symptoms were the ones which distressed her the most. The thirst soon became quite bearable, and indeed eventually ceased to cause any annoyance. The pain in the back and the palpitations ceased after a few weeks. The strength increased, and the spirits became more cheerful, though she was liable to fits of despondency, and once had a violent paroxysm of hysteria, in which she screamed violently for more than an hour. This attack seemed to be caused by the agitation following the injudicious expression of an unfavorable opinion concerning her case, by a friend. There was never much emaciation. The appetite was always voracious. The skin lost its dryness, and at times there was considerable perspiration.

In respect to the physical signs, if the expression may be allowed, the improvement was not less decided, though less striking. The quantity of urine soon began to diminish. She was passing about seven pints daily, when she first came under treatment; the amount fell to six, five, and four pints, which was the average quantity during the last few weeks of her life. Sometimes it fell to three pints, and occasionally rose to five. Once or twice she was not obliged to rise at all during the night, to void it. The urine was of a pale straw color, of a faint sweetish odor, and deposited occasionally a light cloudy mucus. It was uniformly acid, and its density was at first 1039; afterward it fell to 1032. It always contained sugar. It was analyzed three times by Dr. Shaw, with the following results: Dec. 15th, sp. grav. 1039, containing 9·20 per cent. of sugar; Dec. 25th, sp. grav. 1039, 7·30 per cent. sugar; Feb. 2d, sp. grav. 1032, 5·76 per cent. sugar. The last specimen showed a heavy precipitate of large crystals of uric acid, and some torulæ, and had more color than any of those previously examined.

On the morning of Saturday, January 30th, the patient was as well as she had been at any previous time. In the course of the day she had some diarrhœa, which she attributed to taking cold while shopping, on the 28th. At night she had some palpitation. The diarrhœa continued on the 31st, with the palpitation and much pain in the back. Very little urine was passed on this day. She had a very poor night, and vomited a large quantity of nearly black, and very sour fluid. The vomiting continued, with nausea, and some diarrhœa, through the day of Feb. 1st. There was also much palpitation, pain in the back, and despondency. She passed urine twice during the day. Toward evening she grew lethargic, and in the course of the night she became insensible, and remained in a state of coma, from which it was impossible to rouse her, and died twenty-four hours afterward. About a pint of urine was drawn off by catheter fifteen hours before death. It contained sugar.

At the *autopsy*, the chief points of interest were the large amount of fat in the abdominal walls, and about the viscera. The organs were all apparently healthy. There was no congestion of the brain. The bladder was empty.

Dr. Minot remarked, that among the remedies employed in the case the vapor bath gave the greatest relief, the patient always passing a comfortable night after its employment.

Dr. Bigelow expressed himself as having but little hope for a favorable result in this disease. In his own practice, he could not recall a single case of recovery, although every mode of treatment had been tried. He remembered but one case in which the alkaline treatment had been the means of prolonging life. In this case, the patient had unequivocal symptoms of the disease, and two years ago was confined to the house. He now walks out, and is certainly much better than at that time. He took, among other remedies, carbonate of potash for a considerable time, and to this his physician attributes the marked improvement in his condition.

With regard to the case reported by Dr. Minot, Dr. B. further remarked, that although the symptoms abated, the disease nevertheless was steadily progressing, and undoubtedly was the cause of death.

Dr. Minot alluded to several cases mentioned by Prout, in which life had been prolonged, although sugar still existed.

Dr. Hooker mentioned a case of diabetes in which the patient, a laboring man, passed two gallons of water a day, containing a large amount of sugar. The treatment consisted of cod-liver oil, with small doses of nitrate of silver, together with an exclusively meat diet, his drink consisting of water and milk. For the first fortnight no change was perceptible ; but soon after, the quantity of urine diminished, the thirst became less, the appetite better ; and in two months the amount of urine passed had reached its normal standard. The treatment was continued, and the patient entirely recovered and lived three years, having had no return of the disease. He died of gangrene of the lungs.

Dr. Parks alluded to the treatment of this disease by the nitrate of silver.

Dr. Bigelow said that this remedy was given in large doses in a case which occurred at Lawrence, but without any perceptible benefit. The dose was from one half a grain to one grain in amount.

Dr. Hooker said that, in the case mentioned by him, the nitrate of silver was not given in any large quantity, nor did he consider the successful termination of the case to have been in any great degree attributable to the remedy.

Dr. Gould thought, that although the dryness of the skin in this affection would naturally suggest the use of the warm bath, it had been said to be injurious, and this remark was in accordance with his own experience.

Dr. C. E. Ware mentioned two cases of this disease in which the alkaline treatment had proved of great benefit. In one, there had been one or two relapses within three years. In another case, the patient, who is still about town, is supposed to have been cured by the nitrate of silver, it now being six or seven years since the attack.

Dr. Putnam had seen a case in which the vapor bath had proved very beneficial.

Dr. Gould also mentioned a case in which the patient, a waterman, was much improved by a removal to the country, using out-of-door exercise, working in the garden, &c., no medicine being taken.

Dr. Minot alluded to the opinion of Prout and others as to the importance of attacking this disease in its early stage.

Dr. Ellis remarked that the microscopic examination of one of the kidneys of Dr. Minot's patient, who died of diabetes, showed most important changes. The tubuli of the cones and cortical substance were darker colored than usual, and crowded with minute fat globules, granular matter, and probably diseased cells or nuclei. Many free fat globules were also seen, together with irregular cells somewhat resembling epithelium, but so crowded with brownish granular matter, that their character could not be clearly determined. Not a healthy tube or cell was anywhere seen. The results were essentially the same as those noticed in a similar case in 1853. In this, the tubuli of different parts were in like manner filled with fat globules.

In another case, although the cortical substance presented nothing remarkable to the naked eye, the tubuli had lost the greater part of their epithelium. The same appearances were noticed by Dr. Shaw, who also found the tubes crowded with granular matter.

Wedl, in his *Pathological Histology* (p. 308, Vienna, 1854 ; p. 263, Sydenham Soc. Transl.), mentions a single case in which many of the tubuli were filled with fat globules, as were also the free epithelium cells.

These cases are interesting, inasmuch as they show the incorrectness of the common statement, that the kidneys are not diseased in diabetes. Though the number of observations is small, the correspondence between the results is such as to lead us to infer that a more extended examination of the subject would prove that the apparently healthy kidneys participate in the disorder in a most striking manner. By this it is not intended to assume that the difficulty may be traced to the lesion of these organs. The evidence to the contrary is abundant and conclusive. The facts are, however, very important, and will become more so if corroborated by others.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON, MARCH 4, 1858.

FREE CITY HOSPITAL.

We have watched with some interest the proceedings of our City Government in relation to the new Free Hospital. Our readers will remember that an estate for this purpose has been purchased on Springfield Street, after an elaborate investigation as to the necessity for such an institution. For this conclusion let all praise be awarded to the late Municipal government, and especially to the Joint Special Committee who so ably and faithfully investigated the whole subject.

There seems now to be a difference of opinion between the Board of Aldermen and the Common Council, as to the proper mode of managing the institution, and we can only hope that in this difference as to non-essentials the true interests of the institution may not suffer.

We also regret to see an effort to abolish the hospital altogether, on the plea that its establishment will be detrimental to the health of the inhabitants in that part of the city. We can hardly imagine a more suitable place for a hospital than the one selected, as regards position, exposure and the wants of the city. If the objections made are valid in this case, they would be so in every other, and the fact must be proclaimed that, among all the large cities of Christendom, Boston is the only one where space cannot be allowed for the gratuitous treatment of those who are so unfortunate as to be sick and friendless. To show how well founded this objection is, we might cite the experience of other cities. That of Paris alone may be sufficient, with her twelve hundred thousand inhabitants, and her scores of hospitals scattered through the city. Of these we need name but three or four. The Hospital of La Charité contains about 600 patients, suffering from every form of disease, including smallpox, measles and scarlatina, while its massive walls extend hundreds of feet along densely crowded streets, and its windows open directly upon the houses which line the opposite walls. The Hotel Dieu, with its 800 inmates, has stood for eleven hundred years in the oldest and most populous part of the capital; while La Pitié, Beaujon and the Children's Hospital are surrounded by substantial dwellings. We have never heard that those sections were more unhealthy than other portions of the metropolis. To come nearer home, we will cite our own Massachusetts General Hospital, which runs parallel with Allen Street, and nearer the houses lining that street, if we mistake not, than any bordering on the proposed Free Hospital. This objection on the score of health, we consider futile, and we really hope will not be seriously urged.

As to the mode of managing the Hospital; whether it be placed under the General Board of Overseers for Charitable Institutions, or whether it be placed under a board of trustees elected from among the citizens at large for a term of years, we care but little, provided the object sought shall be obtained, viz.: the acquisition of a quiet and comfortable home, where the poor man or woman, mechanic, laborer, seamstress or domestic, when sick and friendless, can find care and shelter, until enabled by returning health to earn the means of subsistence. We will, however, state our belief that this object will be best secured by giving the management of the institution to a board composed of citizens at large, elected for a term of years, rather than to a board of overseers changeable annually, and already burdened with the care of several correctional and pauper institutions. There are many details of hospital management which require constant care and oversight, and which the latter board could hardly give.

Whatever be the course adopted as to mere management, let the aim of our City Government be to relieve the great amount of suffering which now exists in this community for the want of hospital accommodations, a want which the united testimony of nearly all our physicians and charitable associations goes to establish.

We want neither a pauper asylum, nor a pest house, but a Free Hospital for our worthy laboring population, where it shall be no disgrace to enter, and where the best care shall be bestowed gratuitously upon those who cannot be treated at their own homes, or those, more unfortunate still, who are both sick and homeless.

PRONUNCIATION OF MEDICAL TERMS.

MESSRS. EDITORS,—I am happy to have succeeded in calling the attention of *physicians* to the much-neglected subject of pronunciation, but perhaps I did not make my meaning clear enough. I intended to be understood as addressing *scientific men* upon the pronunciation of *scientific terms*. The two English adjectives cer'ebral and cer'vical* are obviously out of place in the connection in which they occur, and were inserted there through an oversight.† A few scientific names which have been adopted into the English language are of course governed by English usage, *when used as English words*. Thus a botanist must call the little wind flower *Anemo'ne Nemoro'sa* if he would avoid the sin of a false quantity, although his little daughter may with perfect propriety present him with a bouquet of *anem'onies*. I will not find fault with a *patient* if he complains of *pleth'ora* or *ver'tigo*; or even if he says he took *al'oes* or *con'ium* for a pain in his *ab'domen*. But for a *physician* to talk of "tinctura *al'oes* et myrrhæ" or of "*con'ium* macula'tum," is obviously wrong. An observation of John Walker upon the word *vertigo* places the whole subject in the true light. "If we pronounce it *learnedly* we must call it *verti'go*, but if we follow *genuine English analogy* we must pronounce it *ver'tigo*." As long as *Latin* continues to be the language of our profession, we must conform in *pronunciation* as well as in *orthography* to *Latin* usage and analogies when we are dealing with *technical* terms.

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* We must not confound the Latin substantive cervical, meaning a pillow, with this English adjective.

† The words glu'teal, menin'geal, pharyn'geal and ob'struent, in the absence of English usage, must be governed by the *quantity* of the penult in the corresponding Latin adjectives.

It would be out of place to fill the pages of a medical journal with authorities for pronunciation, but all needful information may be derived from a comparison of the medical dictionaries of Kraus and of Dunglison with the Latin lexicons of Freund and of Facciolati, and the Greek of Liddell and Scott. MEDICAL STUDENT.

Massachusetts Medical College.—The Annual Commencement for the conferring of medical degrees will take place at the College on Wednesday, March 10th. The exercises will commence at 11 o'clock, A. M., with a prayer by President Walker, after which the graduates will read selections from their dissertations. The degrees will then be conferred by the President, and the whole will conclude with an address by Prof. O. W. Holmes.

The Corporation and the Board of Overseers of the University will be present on the occasion, and the Fellows of the Massachusetts Medical Society, all medical students, and all persons who may be interested in medical science, are hereby respectfully invited to be present.

Wednesday, March 3d, 1858. D. HUMPHREYS STORER,
Dean of the Medical Faculty.

The Lying-In Hospitals of Dublin and Vienna.—MESSRS. EDITORS,—Will you allow me to correct your correspondent from Edinburgh, in the last JOURNAL, as to the comparative number of deliveries in the lying-in wards of the General Hospital at Vienna, and in those of the Dublin Hospital. The number of births at Vienna is between 8000 and 9000 annually; of these, about one third are devoted to the education of midwives, and the remainder, say about 5500, are for the benefit of students—or rather of medical men, the diploma being required for admission to this department of the Hospital. In this latter number, however, are included what are called *Gassengeburten* (street-births). These are births which take place out of the Hospital—the mother, with her child, being brought in within twenty-four hours of delivery; 500 would certainly be a sufficient number for these street-births, and there would then be left 5000, or more than twice the number of births in the Dublin wards.

Yours, very truly, HENRY K. OLIVER, M.D.
2 *Bumstead Place, Feb. 27th,* 1858.

Health of the City.—Last week's report shows a large increase in the mortality, the chief fatal diseases being, as heretofore, those of the respiratory organs. We notice 11 deaths from croup! The total number of deaths for the corresponding week of 1857 was 63, of which 12 were from consumption, 11 from scarlatina, 2 from pneumonia, 2 from croup.

A NOTE from an "Inquirer" will be answered in our next.—"Omega" too late for insertion this week.

Deaths in Boston for the week ending Saturday noon, February 27th, 94. Males, 43—Females, 51.—Inflammation of the bowels, 2—bronchitis, 1—congestion of the brain, 2—softening of the brain, 1—consumption, 15—croup, 11—diarrhœa, 1—dropsy, 1—dropsy in the head, 5—debility, 1—infantile diseases, 6—erysipelas, 2—scarlet fever, 7—typhoid fever, 2—gastritis, 2—disease of the heart, 2—intemperance, 3—inflammation of the lungs, 12—congestion of the lungs, 2—marasmus, 3—measles, 5—peritonitis (Hospital return), 1—scrofula, 2—teething, 1—unknown, 2—whooping cough, 2.

Under 5 years, 57—between 5 and 20 years, 8—between 20 and 40 years, 14—between 40 and 60 years, 10—above 60 years, 5. Born in the United States, 75—Ireland, 14—other places, 5.

Michigan State Medical Society.—The sixth annual meeting of this Society was held in Detroit on the 20th of January last. Dr. J. Adams Allen, of Kalamazoo, was chosen President for the ensuing year; Dr. J. A Brown, of Detroit, Vice President; Dr. E. P. Christian, of Detroit, Secretary; and Dr. Klein, of Detroit, Treasurer. A committee was appointed to report, at the next annual meeting of the Society, the proper means to be used to legalize the procuring of subjects for the study of anatomy. A resolution was passed, expressing the sense of the Society that great care should be exercised on the part of the Medical Faculty of the University of Michigan, and by the members of the Society and the profession generally, in investigating closely the character and qualifications of candidates for admission to the medical classes. The late President, Dr. N. D Stebbins, delivered the annual address, the title of which was, "Medicine an Inductive Science, and Hippocrates the Father of Inductive Science." Six new members were admitted to the Society. Reports and papers were read, on "Rheumatism," on "Diseases and Topography of Livingston Co." and also of "Wayne Co.," on "Vaccination," on "Zymotic Poisons," on "Diseases of Children," and on "Diseases of Coldwater, Mich." Committees were appointed to report on different subjects next year. Thirteen delegates were chosen to the next meeting of the American Association at Washington. Three sessions of the meeting were held on the same day, and at night the Society adjourned to meet next year at Coldwater.

Strafford District (N. H.) Medical Society.—The Semi-Centennial Anniversary of this Society was held at Dover on Wednesday, Jan. 20th. It was observed by an unusually full attendance, and by appropriate exercises of an harmonious and interesting character, which passed off in a manner highly creditable to the Society, and likely to conduce to its future welfare. The following officers were elected:—Dr. Alvah Moulton, President; Dr. A. G. Fenner, Secretary; Drs. D. T. Parker, C. H. Shackford and A. Ham, Councillors; Dr. A. Bickford, Treasurer; Dr. J. H. Paul, Librarian. Addresses were delivered by the President and Secretary—the former being devoted mainly to the morbific effects of the use of tobacco, and the latter to the defence of blood-letting as a remedy.

Effects of heated Furnaces upon Health.—The Fire Marshal of New York city, in his annual report, after alluding to the danger of fire from furnaces in public buildings, thus speaks of their influence upon health, as represented to him by those having the opportunity to judge in the matter.

"Although the consideration of such a question does not come strictly within the sphere of my duties, it seems to me that I am called upon to lay before you certain facts connected with it, which are said to affect the efficiency of one of the most important of our public departments. It has been stated to me, on reliable authority, that the health of the children in the public schools is found to suffer from this mode of heating. In many instances, I am assured, the teachers are obliged to allow the children to leave school before the regulated hours, in consequence of the violent headaches produced by the closeness and impurity of the atmosphere. It is found from experience that the heated air thrown off from furnaces and iron surfaces generally, is divested of most of its vital properties, and is apt to produce congestion. In the case of persons of delicate constitutions, this tendency is immediately developed by furnace heat, and hence the number of children who are sent back ill to their parents. But not merely is this effect complained of in our ward schools; it has long since attracted the attention of physicians, and in some families the use of the furnace is positively prohibited."

He recommends, as the most healthful mode, that schoolhouses be heated by the conveyance of hot water in pipes through the buildings.

The Board of Trustees of the New York State Inebriate Asylum met at Albany Feb. 25th. It is the intention of the Committee on Location to locate the Asylum by the first of next May; and all towns desirous of making offers of sites for the Institution are desired to address Hon. Reuben H. Walworth, of Saratoga, Chairman of the Committee.

The city sexton of Chicago, whose case was referred to in the JOURNAL some time since, has been fined $500 for taking subjects for dissection from the Potter's Field.